

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

CLAIM 18(TWICE AMENDED). A method of making [In] a fiber matrix used as a medium for subsequent resin impregnation, for use in making polishing pads for use in chemical-mechanical process apparatuses for the chemical-mechanical polishing of substrates, [the improvement] comprising:

[said fiber matrix being made] making said fiber matrix by a paper-making wet-laid process comprising the following steps:

- (f) dispersing paper-making cellulosic fibers in water to form a paper-making slurry;
- (g) delivering the paper-making slurry of said step (a) to a paper-making machine and making a paper sheet in said paper-making machine;
- (h) said step (b) comprising draining water from the slurry to form a continuous paper sheet;
- (i) drying the wet-laid continuous paper sheet of said step (c) for creating a relatively soft, compliant fiber matrix from which polishing pads for use in chemical mechanical polishing of substrates are formed.

CLAIM 45(AMENDED). A process of making polishing [Polishing] pads for use in chemical mechanical polishing of substrates, each said polishing pad having a ground polishing surface and consisting of a porous fibrous matrix of paper-making fibers, fillers, and a binder for binding said fibrous matrix, said binder consisting of thermoset resin, said matrix and said

binder forming a porous structure by which polishing slurry or polishing debris during chemical mechanical polishing of substrates are temporarily stored for subsequent rinsing away and for enhanced flow-distribution of the polishing slurry; said ground polishing surface consisting of a ground surface in order that said matrix thereat is of open-pore construction and defines surface asperities by which said optimal distribution of polishing slurry during chemical mechanical polishing of substrates is achieved, so that polishing slurry may be readily absorbed and optimally distributed during chemical mechanical polishing of substrates, said [polishing pads being made by a] process comprising:

- (b) making said polishing pads using a wet-laid paper-making process;
- (b) said step (a) comprising forming a slurry of at least water, paper-making fibers, and latex;
- (c) mixing said slurry of said step (b) in order to disperse the fibers;
- (d) delivering said mixed slurry to a paper-making apparatus, and forming a wet-laid sheet;
- (e) drying the wet-laid sheet of said step (d);
- (f) adding thermoset resin binder;
- (g) said step (f) comprising at least one of: adding the thermoset resin during said step (b), and after said step (e);
- (h) curing the sheet;
- (j) cutting the sheet to form polishing pads of desired size;
- (i) grinding at least one surface face of each said polishing pad to form said asperities and to open the porous matrix for polishing slurry transport during CMP processes.